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Minimal Sets of Maps of Y

LLUÍS ALSEDÀ

Departament de Matemàtiques, Universitat Autònoma de Barcelona, 08193-Bellaterra, Barcelona, Spain

AND

XIANGDONG YE

Section of Mathematics, International Centre for Theoretic Physics, P.O. Box 586, 34100 Trieste, Italy

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Let $Y=\{z\in\mathbf{C}:z^3\in[0,1]\}$ and let $\mathbf{Y}$ be the set of all continuous maps from Y into itself having 0 as a fixed point. We study the set of periods of maps from $\mathbf{Y}$ having all periodic orbits with a division. From this result and the results from Alsedà, Llibre, and Misiurewicz [*Trans. Amer. Math. Soc.*, **313** (1989), 475–538] we obtain a generalization of the theorem about the characterization of the set of D-functions of minimal sets of interval mappings to maps from $\mathbf{Y}$. © 1994 Academic Press, Inc.

1. INTRODUCTION

In recent years there has been a growing interest in the study of the dynamical behavior of maps from a tree into itself, i.e., the set of periods of periodic orbits, invariant sets, topological entropy and other related problems (see for example [1, 2, 3, 4, 6, 8, and 11]).

At the same time, in [12], the notion of a D-function of a minimal set was introduced and the set of all possible D-functions of minimal sets for interval maps was determined.

In this paper we use $\mathbf{N}$ and $\mathbf{C}$ to denote the set of natural numbers and the set of complex numbers, respectively.

Let $Y=\{z\in\mathbf{C}:z^3\in[0,1]\}$ and let $\mathbf{Y}$ be the set of all continuous maps from Y into itself having 0 as a fixed point. The aim of this paper is to study the minimal sets of maps of $\mathbf{Y}$. To this end we use the characterization of the set of periods of periodic orbits of maps from $\mathbf{Y}$ from [3] and the techniques from [12].

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